

Appl. No. 10/712,749  
Amdt. Dated: May 18, 2005  
Reply to Office Action of: February 18, 2005

### **REMARKS**

The applicant wishes to thank the Examiner for reviewing the present application.

Claims 1 – 10, which were not elected in response to the restriction requirement of September 21, 2004, have been cancelled without prejudice to the eventual filing of a divisional application.

Claims 11 to 20 remain in the application.

In amending Claim 11, the applicant has deleted the word “an” before the first occurrence of the word “wave” and changed “wave” to its plural form “waves”, the plural form being the correct form. Furthermore, the applicant has specified that the acoustic transducer is configured and disposed to be used in ambient air.

The Examiner has rejected Claim 11 as being unpatentable over Duykers et al. (U.S. Patent No. 4,216,766) in view of Hansen (U.S. Patent No. 5,453,081). The applicant respectfully submits that the subject matter of Claim 11 is patentably distinct from the teachings of said references, either taken individually or together.

Amended Claim 11 claims a device for assisting a patient in promoting the expectoration of secretions from the lungs, said device comprising:

a signal generator for generating an electrical signal;

an amplifier for amplifying said electrical signal;

an acoustic transducer for converting said amplified electrical signal into acoustic waves, said acoustic transducer being configured and disposed to be used in ambient air; and

an acoustic coupling chamber coupled to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned adjacent an overlaying skin surface;

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wherein said **acoustic** waves are applied to the chest cavity of said patient through said **acoustic coupling chamber**, said acoustic waves having a frequency in a range of about 30 Hertz to about 120 Hertz.

In his report the Examiner has stated that the “vessel 14” of Duykers et al. is the equivalent of the acoustic coupling chamber of amended Claim 11. The Applicant submits that Duykers et al. disclose that a subject is: “partially **submerged in** an acoustically conductive medium 12, such as **water**, **contained** in a vessel 14.” (column 3, lines 53-54). Furthermore, Duykers et al. disclose that the: “Vessel 14 also **contains** a transducer 16, which is capable of projecting an acoustic signal 18 into medium 12” (column 3, lines 55-56). It is clear from these quotations that the vessel 14 of Duykers et al. **contains** both the subject and the transducer, which teaches away from an acoustic coupling chamber **coupled** to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned **adjacent** an overlaying skin surface.

The applicant respectfully submits that Duykers et al. do not disclose an acoustic coupling chamber **coupled** to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned **adjacent** an overlaying skin surface or that said acoustic transducer being configured and disposed to be used in **ambient air** as claimed in amended Claim 11.

Hansen discloses that: “In use, vest 24 is placed about body 12 of human 11 and covers the torso from the thoracic wall 13 around lungs 17 and 18. Air pump 42 is operated **to inflate** air bags 28 and 29 to a selected **pressure**, such as 1 psi.” (column 4, lines 47-50). Furthermore, Hansen discloses that: “Operation of coil 58 causes diaphragm 52 to vibrate thereby establishing the ripple pressure wave in air chamber 59. The result is that air bags 28 and 29 transmit controlled **air pressure pulses** as indicated by arrows 33 and 34 to thoracic wall 13” (column 4, lines 56-60). It is clear from these quotations that Hansen uses **air pressure** within **inflatable** bags to apply **pressure** to the thoracic wall, which teaches away from an acoustic coupling chamber coupled to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned adjacent an overlaying skin surface, wherein said **acoustic** waves are applied to the chest cavity of said patient through

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said acoustic coupling chamber.

The applicant respectfully submits that Hansen does not disclose an acoustic coupling chamber coupled to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned adjacent an overlaying skin surface, wherein said acoustic waves are applied to the chest cavity of said patient through said acoustic coupling chamber as claimed in amended Claim 11.

The Applicant submits that explicit teaching or suggestion is needed to support an obviousness rejection. As submitted above, both Duykers et al. and Hansen teach away from the subject matter of the present invention. Further, there is no teaching, incentive, suggestion or advantage in combining Duykers et al. with Hansen. Duykers et al. teach the: "projecting of an acoustic signal 18 into medium 12" (column 3, line 56) while Hansen teaches the use of air bags to: "transmit controlled air pressure pulses" (column 4, lines 58-59), thus Duykers et al. use acoustic signals projected into a medium while Hansen uses air pressure pulses and not acoustic signals.

Accordingly, it is believed that amended Claim 11 is novel over Duykers et al. in view of Hansen and as such is in condition for allowance. Furthermore, claims 12 to 20 as being dependent upon Claim 11, it is believed they are also novel over Duykers et al. in view of Hansen.

Applicant requests early reconsideration and allowance of the present application.

Respectfully submitted,



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Terri S. Flynn  
Agent for Applicant  
Registration No. 41,756